

# **SMEs GROWTH AND HUMAN CAPITAL INVESTMENTS (THE CASE OF POLAND)**

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**ABSTRACT.** Small and medium enterprises (SMEs) face more threats and challenges than their larger counterparts. [It] This situation is caused mostly by the limited access to resources or their unavailability. That is why SMEs have to manage carefully their resources, plan growth and calculate investments in order to achieve the highest possible return. Many authors claim that one of the most valuable resource for any firm is the human capital (HC); it may be the source of competitive advantage. This article touches upon the relationship between SMEs growth and human capital investments. The main question is whether there is any relationship between the stage of SMEs growth and investments in HC. Do investments in HC support SMEs performance on every stage of their growth? The results of the research conducted on 219 Polish SMEs. On the basis of conducted analysis it can be stated that the share of investments in HC vary in subsequent stages. Moreover HC seems to impose SMEs' performance only in the mature stages, when organisations are well developed and have achieved an appropriate market position.

**Key words:** Human resources, Human Capital, Competitive advantage, Firm Goal, Entrepreneurship

**JEL Classification:** M500, O150, L250, L210, L260

## **Introduction**

Given their importance for the economy as well as due to their diversity, small and medium enterprises (SMEs) became a field of intensified research. The complexity of problems faced by SMEs and the variety of solutions they introduce, create a great opportunity to investigate effective as well as ineffective decisions and actions. Human capital (HC) management is one of the fields that researchers dealing with SMEs focus on. The reason of such a situation can originate both

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from the resource-based view (RBV) theory (Barney, 1991) and increasing dynamics in SMEs growth. According to RBV theory, the companies can build their competitive advantages based on the resources considered as capital, out of which the human capital is the most valuable (Pocztowski, 2007). The dynamics of SMEs growth seem to be a phenomenon of the last decades. Previous research concerning increment and structured models of SMEs growth (Churchill and Lewis, 1983; Quinn and Cameron, 1983; Mintzberg, 1984; Greiner, 1998; Adizes, 2004) fail to explain the path to success of the 'born global' firms, defined as companies that from their initial phase seek to derive competitive advantage by operating on global markets (Gabrielsson et.al 2008).

However, according to recent research (Vlachos, 2009; Patel and Cardon; Pauli 2014; Razouk, 2011; Sheehan 2013) SMEs suffer from the lack of proficiency in HC management which lowers their competing position (especially in relation to larger companies). Moreover, human capital management practices were among the ones seen as less developed, and having a minor position in SMEs management (Razouk 2011). Although there are numerous HC management practices that can affect organisational performance, it is difficult to indicate how particular practices influence it. What is more, it is difficult to define causal relationship between investments in human capital or introducing human resource management practices and SMEs growth or their profitability. That is why researchers focus on investigating the relation between human capital and growth (Vlachos 2009).

The aim of this article is to show the correlation between the level and share of investments in human capital in total investments, and their economic results. As owners and managers of SMEs are highly oriented on goal achievement and profitability, pointing out such a relationship may help them in advancing their organisations.

The structure of the article is the following: the review of organisational growth theories is presented and key development areas in each stage are discussed. It is followed by analyses of the sources of competitive advantage of SMEs and the importance of human capital. The last part of literature review touches upon the investments in human capital and discusses possible forms of enhancing the value and quality of it. In the next part the research model is presented and hypotheses are discussed. It is followed by sample characteristics and results of the research conducted on 382 SMEs. The last part contains discussion and hypotheses verification.

## **Literature Review**

### ***a) Organization growth theories***

Since the early 80's many scholars and scientists developed growth theories that correspond to organizations' life cycle. Most of them provide

researchers and policy-makers with information making it possible to choose between imperfect means for describing or characterising SMEs growth (McMahon, 1998). According to Floren (2011), the developed models can be divided into four groups that take into consideration: (1) environment and strategy – for example Quinn and Cameron (1983), (2) role of the entrepreneur/manager – Adizes (2004), (3) resources and capabilities – Flamholtz (1995) and (4) consequences of growth – Greiner (1998). Regardless of the approach, most of the models state that there are stages in firms' existence which cause changes in their market position and in internal processes development. Depending on the authors, the number of stages vary from four to ten, and each stage can be characterised by specific features.

**Table 1.** Organisations growth models and HC requirements

THE MODEL BASIS	STAGES	REQUIREMENTS FOR HC
<b>Churchil and Lewis (1983)</b>		
<p>Subsequent stages are connected with growth which is related to market share, incomes and internal development. There are eight factors that are important for SMEs success or failure. Four of them relate to the enterprise and four to the owner.</p>	<ol style="list-style-type: none"> <li>1. Existence</li> <li>2. Survival</li> <li>3. Success</li> <li>4. Take-off</li> <li>5. Resource maturity</li> </ol>	<p>HC is very important at initial levels because it helps with designing products or services. On subsequent stages it imposes performance and enable to provide SME with appropriate level of process maturity. In the group of factors which relate to the enterprise and are important for success, <i>personnel resources</i> are mentioned. In the group of these related to the owner managerial as well as operational abilities are pointed out.</p>
<b>Quinn and Cameron (1983)</b>		
<p>At each of the growth stages organisational effectiveness stem from different configurations of four models of organisational</p>	<ol style="list-style-type: none"> <li>1. Entrepreneurship</li> <li>2. Collectivity</li> <li>3. Formalization and control</li> <li>4. Elaboration of structures</li> </ol>	<p>HC refers mostly to the <i>human relations</i> model. That causes that it is the most important for effectiveness at the stage of <i>collectivity</i> and <i>elaboration of structure</i>. Human relations model is connected with employees</p>

performance: <i>human relation, open systems, internal process and rational growth.</i>		satisfaction, competences as well as with internal communication systems.
<b>Scott and Bruce (1987)</b>		
There are possible crises that may appear between particular stages and are connected with some changes that have to be made.	<ol style="list-style-type: none"> <li>1. Inception</li> <li>2. Survival</li> <li>3. Growth</li> <li>4. Expansion</li> <li>5. Maturity</li> </ol>	At each stage there are activities requiring appropriate level of HC. For example: the scope and number of activities that have to be perform, building external relationships aimed at creating distribution channels, improvement of products and services, managing multiple processes. Insufficient level of HC may cause crises at each level.
<b>Hanks et al. (1993)</b>		
The model was based on the analyses of organisations' complexity including the number of structure levels, functions and employment.	<ol style="list-style-type: none"> <li>1. Start up</li> <li>2. Expansion</li> <li>3. Maturity</li> <li>4. Diversification</li> </ol> <p>1a) Life-style 2a) Capped Growth</p>	The HC is correlated with the possibility to run managerial tasks, to create and fulfil specific functions and to cooperate. Moreover, in the expansion stage competences related to consumer orientation are required. Moreover in the diversification stage HC is required for developing new products and services.
<b>Greiner (1998)</b>		
Organisation growth can be divided into phases of evolutionary and revolutionary changes. Revolutionary changes are connected with managerial crises.	<ol style="list-style-type: none"> <li>1. Creativity</li> <li>2. Direction</li> <li>3. Delegation</li> <li>4. Coordination</li> <li>5. ?-cooperation or network</li> </ol>	HC is correlated with all the phases of growth. It refers to the level of managerial competences as well as to the competences of employees who have to fulfil their tasks, cooperate and perform in accordance with rules and procedures.

<b>Flamholtz (1995), Flamholtz and Randle (2007)</b>		
Developed six key dimensions of organisational performance that refer to: (1) <i>market segment or niche</i> , (2) <i>products and services</i> , (3) <i>resources</i> , (4) <i>operational systems</i> , (5) <i>management systems</i> , and (6) <i>corporate culture</i>	<ol style="list-style-type: none"> <li>1. New venture</li> <li>2. Expansion</li> <li>3. Professionalization</li> <li>4. Consolidation</li> <li>5. Diversification</li> <li>6. Integration</li> <li>7. Decline</li> </ol>	HC in this model refers to three dimensions of organisational performance that are: <i>acquiring resources</i> , <i>managerial systems</i> and <i>corporate culture</i> . According to the model developed by Flamholtz and Randle these three dimensions are crucial for performance in the expansion, professionalization, consolidation, integration and decline stage.
<b>Miller and Friessen (2014)</b>		
Organisations differ in accordance with four main features: <i>strategy</i> , <i>situation</i> , <i>structure</i> and <i>decision making style</i>	<ol style="list-style-type: none"> <li>1. Birth</li> <li>2. Growth</li> <li>3. Maturity</li> <li>4. Revival</li> <li>5. Decline</li> </ol>	HC refers mostly to the possibility to introduce appropriate managerial style. Thus both the manager and the employee should have appropriate competences enabling fulfilling strategic aims and cooperate within the structure.

**Source:** Churchil and Lewis (1983), Quinn and Cameron (1983), Scott and Bruce (1987), Hans et al (1993), Flamholtz (1995), Greiner (1998), Flamholtz and Aksehirli (2000), Flamholtz and Randle (2007), Miller and Friessen (2014)

All of these models assume that the changes in companies' existence require changes both in internal systems and in the way they act on the market. While introducing such changes companies must use their resources in order to take advantage of emerging opportunities and prevent potential threats. One of these resources, which was discussed in the table 1 is human capital. In the following section the importance of human capital for achieving success and competitive advantage will be discussed.

### **b) Human capital as a source of SMEs success**

While operating and implementing their strategies, the resources the firms use can be treated as strengths to reach desired goals or build their market position. According to Barney (1991) firms' resources can be divided into three

groups: (1) physical capital: consisting of technology, plant, equipment, location and access to raw materials, (2) human capital: including knowledge, intelligence, relationships, attitudes and abilities, and (3) organisational capital: represented by structure, internal systems and relations between groups within a firm and in its external environment (for example with business partners, suppliers, subcontractors). These resources can be the foundation of sustained competitive advantage if they are valuable, rare, inimitable and non-substitutable (VRIN).

According to Galbreath (2005) a firm's resources can be divided into two main categories: (1) tangible resources and (2) intangible resources. Tangible resources include financial assets and physical assets, while intangible resources consist in: *intellectual property assets, organizational assets, reputational assets and skills that include organizational capabilities*. On the basis of such categorisation Galbreath (2005) hypothesised that *intellectual property assets, organizational assets* as well as *reputational assets* contribute more significantly to the firm's success than *tangible assets*. Moreover, *organisational capabilities* have the greatest impact on the firm's success than any other resources. A capability is defined as a capacity to make use of a company's assets in order to reach a higher level of performance (Maritan, 2001). Capabilities are considered to be skills and accumulated knowledge that are the foundation of organizational routines (Galbreath, 2005). These routines, having a strategic aspect, allow organisations to achieve new resource configuration when changes on the markets occur. They can integrate, restructure and release resources providing high level of adaptability (Eisenhrdt, Martin 2000). Capabilities stem from organizational practices and are crucial for achieving strategic goals, and they result from actions taken by people, organisation history and stakeholders' activity (Kostova & Roth 1999).

Pike, Roos and Marr (2005) indicate that factors building organisations' potential originate from: *human capital, organisational capital, relational capital* and *financial assets*. Human capital includes knowledge, skills, motivation, abilities and attitudes of employees. They are crucial for fulfilling tasks on job positions, and because of their unique configuration cannot be imitated. Organisational capital consists of organizational culture, implemented strategies, structures, internal systems and procedures that regulate the way organisations operate. Organisational capital originate from firms' history and refers to the market situation. Relational capital includes relations with customers, suppliers, subcontractors, business partners and other stakeholders.

Because of their size and characteristics SMEs cannot compete with large companies that, in general, possess important physical and financial assets. Moreover, SMEs do not have well designed structures or procedures. They can rely mostly on the intangible resources, of which human capital seems to be most

important. It consists of knowledge, skills, motives, abilities, attitudes and health (Schultz, 1961). These components have a significant value for both employees and employers and are the source of incomes (Pocztowski, 2007). According to Sheehan (2013) human capital may have a higher impact on SMEs' rather than large companies' performance, because such organisations have to do more than large companies with fewer resources. Human capital is also critically important for the survival of SMEs because they are very often more labour-intensive than larger companies (Patel & Conklin, 2012). Moreover, human capital is perceived as a key success factor in knowledge based economy, it can be a foundation of relational as well as organizational capital and is a source of innovativeness (Pauli, 2014).

Despite the fact that human capital has such a significant meaning for SMEs they have limited options in acquiring it. With regard to human resource architecture there are four ways SMEs may accumulate it: (1) internal development, (2) acquisition, (3) contracting, and (4) alliance (Lepak & Snell, 1999). However, because of the lack of other resources and legitimacy on marketplace, SMEs may face many challenges connected with HRM (Patel and Cardon 2010). It may result in problems with recruiting employees that have the required competences or setting short or mid-term alliances. It seems that internal development consisting of a range of human capital investments may be the most appropriate for SMEs.

### ***c) Human capital investments***

Investments in human capital are those type of investments aimed at sustaining or developing the quality and value of human capital components (Lipka, 2010). Investing in HC by an organisation refers to expenditures on actions increasing or sustaining the value and quality of knowledge, skills, abilities, attitudes and health of employees. According to Schultz (1961) three types of expenditures may appear: (1) those referring to preferences and needs that impact only satisfaction and do not increase knowledge or skills, (2) those referring strictly to knowledge and skills improvement having no impact on satisfaction, (3) those that improve knowledge and skills and are the source of satisfaction. Some of the organisational expenditures are difficult to categorize as investments due to the lack of direct impact on organisation performance. For example *wellness* programs that, on the one hand, do not increase the level of knowledge or skills, while on the other can improve health, an important component of HC that can increase motivation.

Becker (1962) described four main forms of investing in HC that are: (1) on the job training, (2) schooling, (3) other activities aimed at acquiring information and (4) wage increase. On the job trainings support the development

of knowledge and skills, enhancing the attitudes that the employee already has and that are required while fulfilling tasks. This kind of investments highly corresponds to organisations' expectations. Schooling enables the development of both specialist as well as general knowledge and skills. This knowledge and skill can suit particular organisation's expectations as well as posts in other firms. Other activities may result in developing general knowledge about the branch, products or other specific issues. The most common forms of such investments are, for example seminars, conferences, meetings. Wage increase is aimed at raising the level of employees' involvement, and when connected with achieving goals is a way of rewarding. Increasing wages is also a way to keep valuable employees in the organisation.

Lipka (2010, based on in-depth analyses of expenditures aimed to increase the value of human capital, proposed a list of more than twenty categories of investments in human capital. They refer to (1) increase of knowledge and skills (for example on-the-job and off-the job trainings), (2) changing attitudes (coaching, cooperation development, teams-creation), (3) improving working conditions, (4) building commitment and involvement (benefits, retention programmes, employer branding) and (5) supporting health (additional insurance, healthcare, work-life balance programmes).

Taking into consideration possible initiatives, investments in human capital can be divided into two broad categories. The first one comprises the actions that support direct development or sustain the value of HC. Such investments are aimed at: knowledge, skills, attitudes, health, values and beliefs. The second group includes actions that support indirectly the development of HC. They are focused on teamwork, organizational culture, job satisfaction, involvement, internal communication and relations.

### **The model and hypotheses**

On the basis of organisational growth models (Churchil and Lewis 1983, Quinn, Cameron 1983, Scott and Bruce 1987, Flamholtz 1995, Hanks et. al. 1993, Greiner 1998, Adizes 2004, Miller and Fressen 2014) a five stage growth model was developed. Each of the stages was characterised by a set of features that refer to:

1. Products/services - range, complexity, uniqueness, number of modification made,
2. Distribution – selling techniques, facilities for customers, type of purchase (single or multiple),
3. Technology – innovativeness, changes in technology made,



4. Management – decision-making process, level of tasks specification, structural solutions, communication systems, relationships among employees
5. Finance – way of financing liabilities, usage of external financing, cooperation with investors, margin calculation schemes, cost management systems, extent to which finances are planned,
6. Customers – structure, segmentation, CRM systems, customer satisfaction
7. Brand – recognition, image of a company
8. Stakeholders – profile of suppliers, profile of subcontractors, type of relationship with suppliers and subcontractors, changes in cooperation, membership in societies.

The general characteristics of the stages are the following: (1) **Survival** – low market share, no regular customers, financing provided by the owner's capital, narrow offer, no structural solutions and lack of internal systems; (2) **Take off** – products meet expectations, increasing income, widening internal processes, brand recognition in some groups, basic relationships with stakeholders, simple structural solutions, less centralised decision making process; (3) **Prime** – increasing market share and income, developing and widening products, good brand recognition, new technological solutions, management systems, stable relationships with crucial suppliers and subcontractors, functionally based structure, further decentralisation in decision making and management; (4) **Maturity** – high income, higher costs, well designed management systems, well recognized brand, well designed cooperation with stakeholders, complex structural solutions, decentralised management, creation of specialized departments; (5) **Decline** – decreasing income, market share and number of customers, highly developed internal systems, decentralised management, complex structure with departments, divisions and project teams. Each of these stages can be also characterised by specific terms of cooperation and relationships with customers, suppliers and business partners.

In each of the stages, SMEs build their competitive position based on the resources that can be treated/considered as organisation's strengths. These resources are divided into five groups: (1) human capital, (2) organisational capital, (3) relational capital, (4) tangible assets and (5) financial assets (Barney 1991, Galbreath 2005, Pike, Roos and Marr 2005). Growth oriented companies should invest in each of these resources in order to build their competitive advantage. Because SMEs have, in general, limited resources in comparison with large companies the most valuable for them may be the intangible assets out of which human capital seems to be crucial (Pocztowski, 2007; Patel & Conklin, 2012; Sheehan, 2013; Pauli, 2014).

*H1: The share of investments in HC in total investments impact the level of return on investments (ROI)*

Because of the perceived importance of human capital for SMEs success, investments in this resource should have a positive impact on performance indicators of SMEs that are: (1) sales value, (2) sales amount, (3) profits, (4) number of customers, (5) number of employees, (6) general economic condition, and (7) brand recognition.

*H2: the value of HC investments has a positive impact on performance indicators of SMEs*

*H3: the share of HC investments in total investments has a positive impact on performance indicators of SMEs*

Because each growth stage can be characterised by a set of different features, and companies face different challenges in subsequent stages they should diversify the structure of investments in every stage to achieve the highest ROI.

*H4: The share of investments in HC in total investments vary in every growth stage between companies with highest and lowest ROI.*

There are many forms of investing in HC that range from simple ones, like on-the-job-training, to complex ones like additional benefits, investments in working conditions (Schultz, 1961; Becker, 1962; Lipka, 2010). As SMEs grow, their internal systems become more complex which may make the number of investments in HC increase as well.

*H5: The more developed SMEs are the more different forms of investing in HC they apply.*

## Data and results

### *The sample*

The research was conducted between April and May 2015 on a group of 382 (Polish) SMEs. They were selected randomly from the database that consists of 1950 units. The study was conducted with the use of PAPI technique and owners or managers were interviewed. General characteristics of the sample are presented in Table 2.

**Table 2.** Sample characteristics

SMEs' characteristic	%
<b>Profile</b>	
Production	28
Services	62
Selling	31

<b>Operating market</b>	
Local	37
Regional	34
Country	26
International	13

The first step in the analysis was to verify the data and to calculate the ROI value. Unfortunately not all respondents provided the data concerning investments expenditures or profit. After screening the database, 219 SMEs were selected for further study. In order to identify the growth stage of each SME, eight main categories were evaluated and *k-means* method was applied to divide the investigated companies into particular stages of growth. As a result 55 companies could be considered as being in their survival stage, 43 in take-off, 50 in prime, 41 in maturity and 30 in decline stage. Based on the financial data, the value of ROI and the share of each category of investments in total investments were calculated. Then statistical analysis using structure and incidence (e.g. calculating the percentage of a given category of investment in overall investments), selected descriptive statistics, as well as k-means clustering method and correlation coefficient were used.

### **Results**

The first stage of statistical analysis was to estimate the structure of investments in SMEs. The share of investments in particular capitals and assets with regard to the ROI level is presented in table 3.

There is a difference between the shares of particular categories of investments in subsequent stages of SMEs growth. Most funds in each stage are spent on tangible assets. The share varies from 41 to 56 percent for the companies with high ROI and from 47 to 63 percent for the companies with low ROI. Definitely financial assets have the lowest share in general.

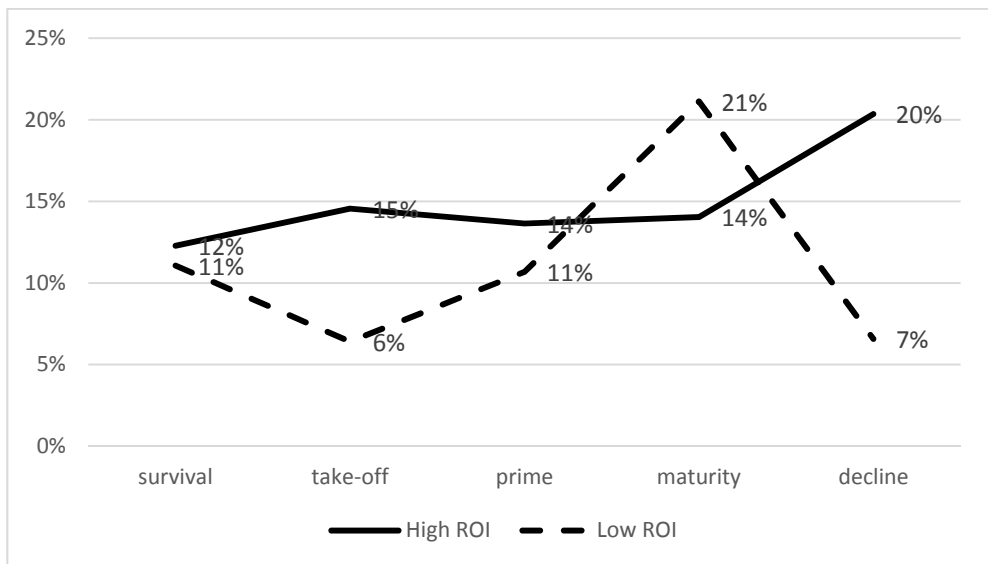
**Table 3.** Structure of investments

<b>Stage</b>	<b>ROI level</b>	<b>Human Capital</b>	<b>Organisational Capital</b>	<b>Relational Capital</b>	<b>Tangible Assets</b>	<b>Financial Assets</b>
survival	Low ROI	11,1%	25,9%	6,4%	48,0%	8,6%
	High ROI	12,3%	21,4%	5,8%	54,6%	6,0%
take-off	Low ROI	6,4%	11,5%	5,2%	63,3%	13,6%
	High ROI	14,6%	20,0%	5,1%	55,9%	4,4%

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prime	Low ROI	10,7%	18,3%	2,1%	63,4%	5,6%
	High ROI	13,6%	26,4%	7,7%	51,7%	0,6%
maturity	Low ROI	21,1%	24,9%	6,8%	47,2%	0,0%
	High ROI	14,0%	24,6%	4,5%	43,7%	13,2%
decline	Low ROI	6,6%	23,1%	1,8%	54,0%	14,6%
	High ROI	20,4%	29,0%	9,3%	41,4%	0,0%

Taking human capital into account there is also a difference between the shares of these investments at particular stages (as Figure 1 shows). In the survival stage the share of HC investments is similar in SMEs with high and low ROI but in the next stage the difference is about 9%. Firms with high ROI level spend more on HC investments while those with low ROI prefer investments in other resources (mainly tangible assets; see Table 3). In two subsequent stages (prime and maturity) the companies with high ROI levels spend almost the same amount of funds on HC investments. In prime stage the share is about 11 percent and in maturity stage it is much higher accounting for 21 percent. In decline stage companies with high ROI spend much more on HC investments than those with low ROI, the difference is almost 14 percent.



**Figure 1:** The share of HC investments in total investments in particular growth stage

For testing hypotheses 1-3 the correlation between (A) *value of HC investments*, (B) *share of HC investments*, (C) *ROI level* and performance indicators such as: (1) *amount of product sale*, (2) *amount of service sale*, (3) *value of products sale*, (4) *value of service sale*, (5) *profits value*, (6) *number of customers*, (7) *number of employees*, (8) *financial condition* and (9) *brand recognition* were verified.

In reference to performance indicators owners or managers were asked if they could observe *a definite decrease, decrease, no changes, increase, a definite increase*, in the last three years. All these correlations were verified both for all of the companies regardless of their growth stage and for each stage separately. Because of a large amount of data table 4 presents only the variables that correlate with the  $p < 0,05$ .

**Table 4.** Correlation between HC investments and economic variables

<b>VARIABLES</b>	Mean	SD	Value of HC inv	Share of HC inv
<i>All companies</i>				
Amount of products sale	3,22	0,79	0,159224	
Number of customers	3,26	0,78	0,140317	
Value of HC investments	15842,26	35915,56	1,000000	
Share of HC investments	0,12	0,18	0,189267	1,000000
ROI level	4,95	13,51		0,269124
<i>Survival stage</i>	Mean	SD	Value of HC inv	Share of HC inv
Number of customers	3,145	0,78	0,288204	0,291948
Value of HC investments	9800,000	19240,35	1,000000	
Share of HC investments	0,105	0,18	0,399167	1,000000
ROI level	4,301	15,27		0,399887
<i>Take-off stage</i>	Mean	SD	Value of HC inv	Share of HC inv
Financial condition	2,930	0,67	-0,373224	
Value of HC investments	7840,000	12866,09	1,000000	
Share of HC investments	0,110	0,20		1,000000
<i>Prime stage</i>	Mean	SD	Value of HC inv	Share of HC inv
Value of HC investments	8030,000	13701,86	1,000000	
Share of HC investments	0,103	0,17	0,288784	1,000000
ROI level	6,764	17,61		0,529915

<i>Maturity stage</i>	Mean	SD	Value of HC inv	Share of HC inv
Amount of product sale	3,41	0,74	0,367730	
Amount of service sale	3,46	0,64	0,500188	
Value of service sale	3,59	0,67	0,324188	
Brand recognition	3,22	0,47	0,365349	
Value of HC investments	14412,85	15959,96	1,000000	
Share of HC investments	0,13	0,21		1,000000
<i>Decline stage</i>	Mean	SD	Value of HC inv	Share of HC inv
Value of HC investments	53363,59	79814,62	1,000000	
Share of HC investments	0,16	0,14		1,000000
ROI level	6,73	12,27		0,374456

The share of HC investments in total investments is positively related with the changes in the number of customers thus only in the firms that are in *survival stage*. The shares of HC investments are also positively correlated with the level of ROI for companies in their *survival, prime* and *decline* stage.

The *value of HC investments* is correlated with the *amount of product sale* and the *number of customers* when taking into consideration all of the companies regardless of their growth stage. In the *survival* stage it is correlated only with the *number of customers*, and in the *take-off* stage it is negatively correlated with the *financial condition*. In the *prime* and *decline* stage there is no correlation between the *value of HC investments* and performance indicators. The *value of HC investments* seems to be the most important for the companies in *maturity* stage because it correlates with four out of nine characteristics that are: *amount of product sale, amount of service sale, value of service sale* and *brand recognition*.

These results partly support H1, that *the share of investments in HC in total investments impacts the level of return on investments (ROI)*. There is a positive correlation only for companies that are in *survival, prime* and *decline* stage.

The results of statistical analyses do not support H2 that: *the value of HC investments has a positive impact on performance indicators of SMEs*. Only for companies in maturity stage was found a correlation between the value of HC investments and the four variables.

There is no correlation between *the share of HC investments in total investments and performance indicators of SMEs*, which does not support H3.

In the study, fifteen different types of investments in HC were analysed. Studying the complexity of such investments in reference to the stage of growth it was found a positive correlation between the number of types of investments used and the stage of growth (0,271371,  $p=0,005$ ). The mean value of the number of investments types vary from 1,6 in survival stage to 3,5 in decline. This supports H5: *The more developed SMEs are the more different forms of investing in HC they apply.*

## Discussion

According to many authors human capital due to its value, rareness, inimitability and non-substitutability can be a source of competitive advantage. Moreover, due to SMEs characteristics and their limited access to other resources it can be a crucial factor for success or even survival (Sheehan, 2013; Patel & Conklin, 2012).

The present research does not support this point of view. Despite the fact that there are some correlations with the *amount of product sale*, *amount of service sale*, *value of service sale* and *brand recognition* in the *maturity* stage there are no direct relationships between the *value of HC investments* or the *share of HC investments* and performance indicators. Furthermore, in the *take-off* stage a high value of HC investments may be a constraint in companies' growth.

Comparing the results of the research with organisational growth theory it can be stated that in the early stages of growth (that are *survival*, *take-off* and *prime*) some other resources play a more important role in SMEs success. For example in the survival stage the tangible assets might be the important resource that allow to produce or sell services to customers. In the *take-off* stage, the tangible assets as well as the relational capital could play a crucial role. In the *prime* stage organizational capital that refers to internal systems and procedures could play the most important role.

Gathered data makes it possible to conduct in-depth analysis of the investments in HC. Their value, type as well as number of incentives were taken into account. On the basis of this additional analysis it can be stated that the mean value of investments in HC capital as well as the number of types of such investments increase subsequently in each stage. At the same time the share of such investments remains more or less the same (see table 3). It proves that HC investments do not have an important impact on SMEs performance in every stage and real profits from HC investments can be gained only when the organisation is well developed and has achieved an appropriate market position.

The main limitations of this research may stem from the number of organisations, their diversity, and technique used. Despite the fact that 219 companies were analysed and 382 were investigated, taking into account the total number of existing Polish SMEs the sample is relatively small. Moreover, these companies represent different sectors and size (although all belong to the group of small or medium enterprises). This may cause some biases because in some productive sectors the impact of particular resources on performance and growth can be totally different than in service oriented companies. It should also be mentioned that all the information were gathered during interviews with managers/owners of SMEs and referred only to the data included in financial statements for 2014. In order to analyse the impact of investments on performance and growth makes it is necessary to compare the collected data with those referring to a longer period of time.

**Acknowledgement:** The research was financed by the funds of Polish National Science Center. Grant no: DEC-2012/07/d/HS4/00789

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